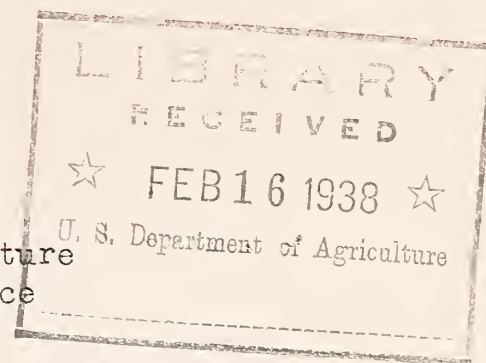


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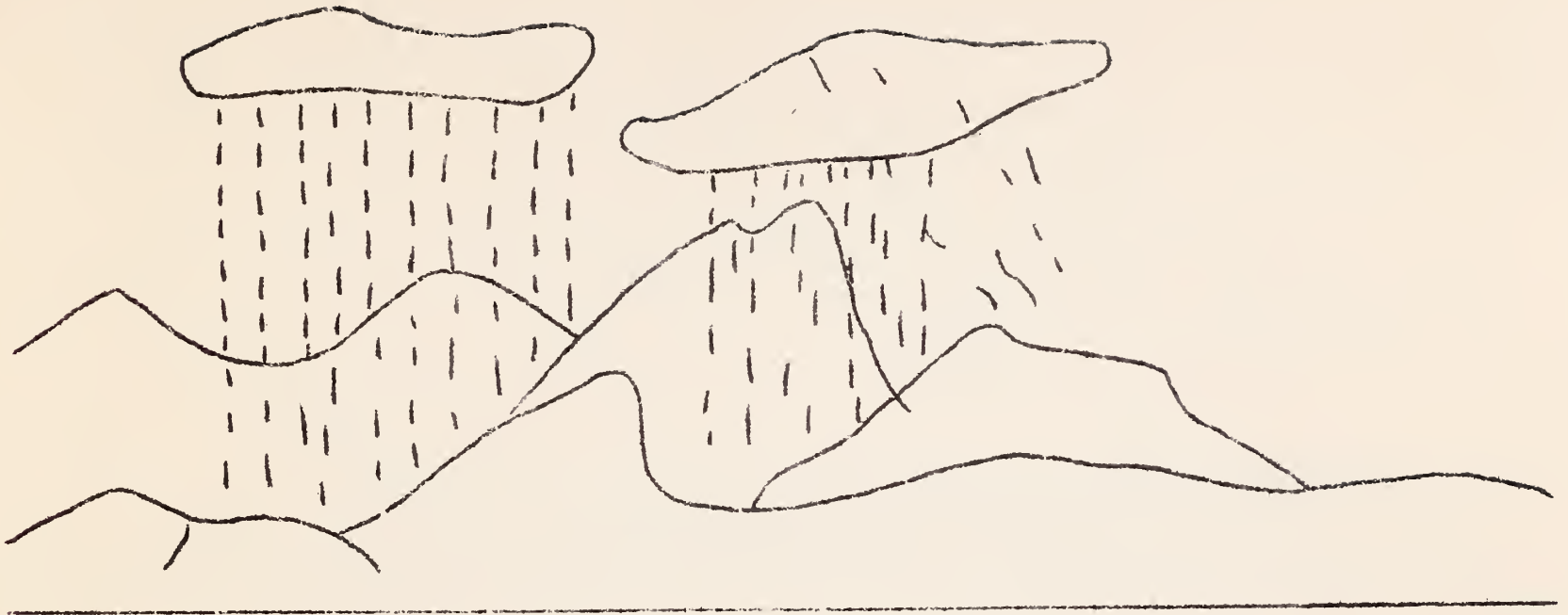
United States Department of Agriculture
Region 8, Soil Conservation Service
Albuquerque, N. M.

SUGGESTIONS FOR A TEACHING UNIT
OF
CONSERVATION OF LAND AND WATER
For Beginners

Part I

Compiled By
Anne Raymond

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SUGGESTIONS
FOR A
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BEGINNERS

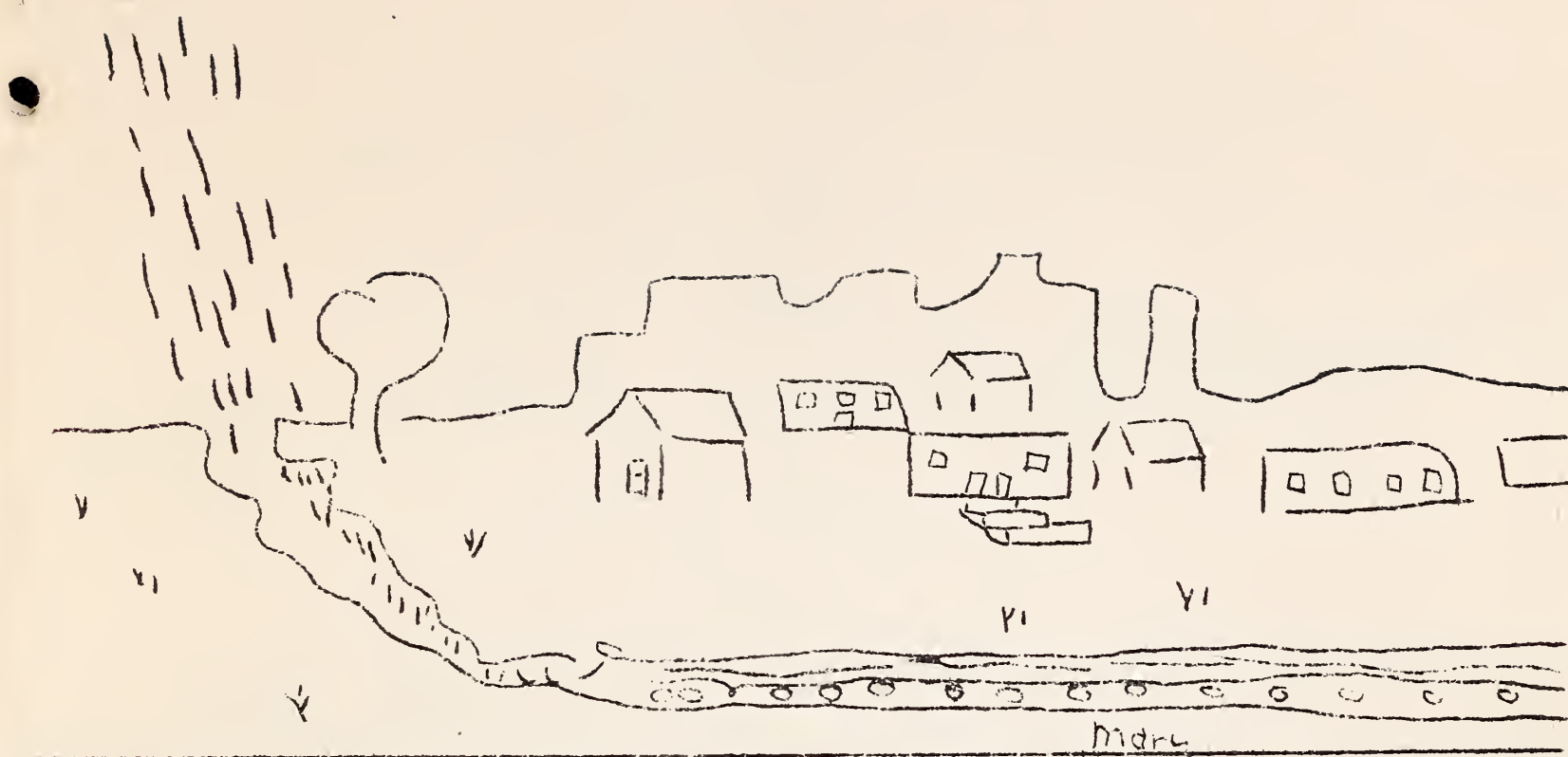
Teaching Correlations by Mary Dovere, First Grade,
Menlo Park, Tucson, Arizona, and Jane Robbins,
First Grade, Safford, Arizona.

The theme running throughout this unit was to develop a consciousness of land and water as valuable assets in maintaining life; a knowledge that land needs ground cover to protect it; that water is necessary for all growth, but it becomes a destructive force if not properly used.

In an eight weeks' project, the natural interest of children in things about them, and their love of excursions, was centered on a study of the land. The class observed the sand blow; they went out to see where it came from; they talked about why it blew; what would stop it from blowing. They observed how clean rain is when they caught it in their hands when it rained; how muddy it looks in the river; why it is muddy; what should be done about the mud.

In Art and Spelling, Language and Reading, they pictured and wrote of their land. A report from this unit is offered as a suggestion for other similar teaching units.

Division of Education - Information
Southwest Region, Soil Conservation Service
Albuquerque, New Mexico



LAND AND WATER USE

Specific Objectives

1. To learn about the land: hills, valleys, grass, trees, ocean, lakes, rivers, etc.
2. To learn how water gets into the clouds, then down to the earth; hail, rain snow.
3. To learn how grass and trees grow; what their roots do for the land.
4. To learn that plants help to keep the water from running off the land too fast; water running fast digs holes; holes and gullies wear away the land; water carries silt which is our topsoil.

Learning Situations

We saw the dust blowing in our schoolyard. We picked up some in our hands. It was fine and crumbly. We blew it in our hands, and it went away in the air. We walked farther and found a bunch of grass. The dust did not blow here. We pulled up some grass and found little roots holding soil. We went back to the classroom. We built four boxes. We put dirt from our schoolyard in two of them. We brought dirt from the ground in the woods for the other two. We planted some alfalfa and grass seed in them. We watered one good box and one poor box. We let the other ones stay dry. We watched the seeds grow. Every few days we pulled up a little seed. We saw the roots spreading out into the ground. The seeds did not grow in the dry dirt so well. They got drier and drier, and most of them withered up and died. We knew then that little seeds need water. The ground in the good box, which was watered, was held by the plants and did not blow. The plants caught the water and it did not run off fast. The water made the plants grow. The plants held the ground from washing and blowing away.



Leaves and grass tops manufacture food - Roots, stem, seeds store food. Peter

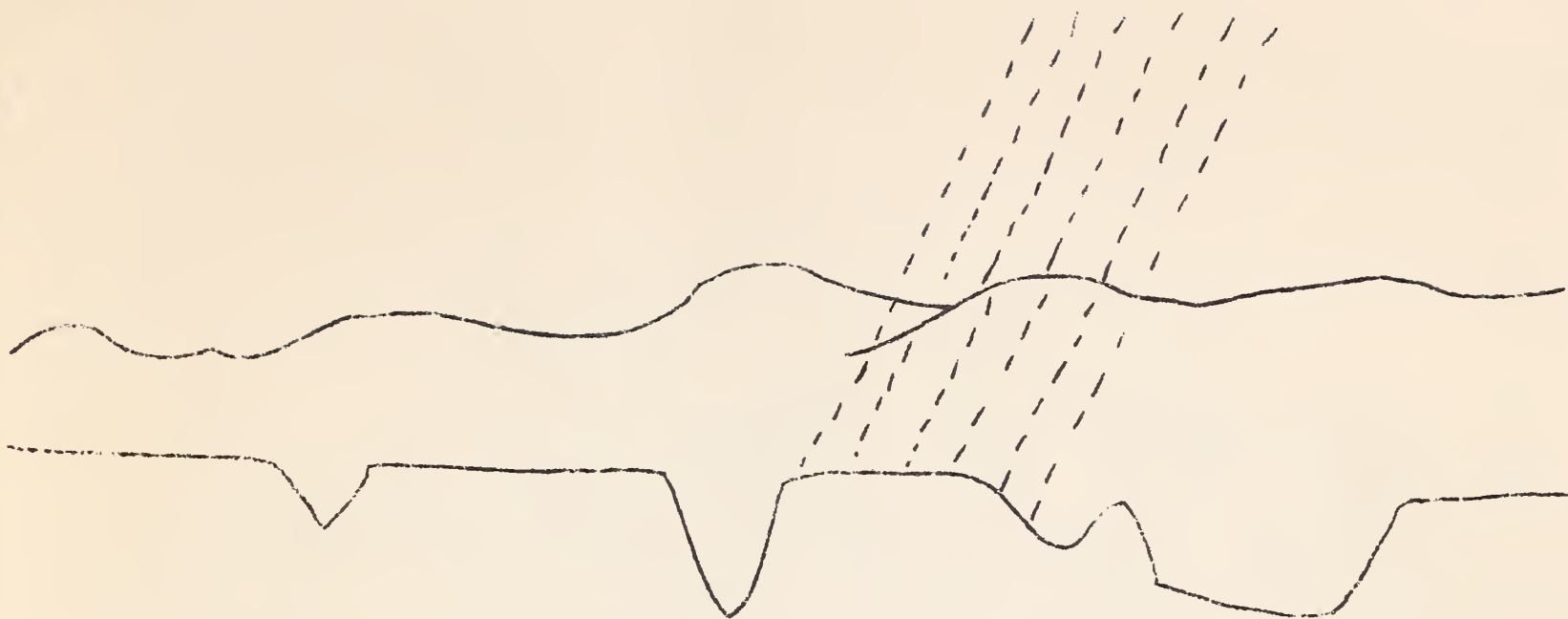
LANGUAGE (Oral-Written) Specific Objectives

1. To learn to speak with expression, clear enunciation.
2. To gain in ability to speak freely and interestingly.
3. To improve in spelling and proper sentence structure.
4. To broaden our understanding and interests.
5. To listen courteously while another talks.

Learning Situations

We used the out-of-doors as the basis of our activity. We told stories in class of the land around our school; our home; the flowers we grew; the grass in our yard; the park; the churchyard. We listened to stories about forests; snow; mountains; farming; birds. We talked of the way grass grows. The leaves and blades manufacture the food; the ground and air furnish the food. Roots hold the soil. Trees and grass drop leaves and blades to make a blanket for the earth. This blanket helps to keep the seeds warm. This blanket helps to hold the water away from the sun so that it will not go up in a cloud so soon. We talked about the raindrop; where it comes from; where it goes; what it does for us; what happens if the rain falls on bare land; on nice grassland; on forest; on gardens; where the rain goes after it reaches the ground.

The class learned poems about trees and birds and wind and rain. They wrote sentence stories about the land. They made a supplementary reader and illustrated it.



Gullies grow bigger and bigger

Mary

READING AND LITERATURE
Specific Objectives

1. To increase interest in reading.
2. To arouse an interest in stories about water (raindrop), ground cover (grass, trees, vegetables, flowers, etc.)
3. To gain in ability to recognize new words, especially words connected or associated with animals, plants, land, water.
4. To improve in oral and silent reading.
5. To gain in appreciation of pictures, plants, birds, trees, water uses, land uses.

Learning Situations

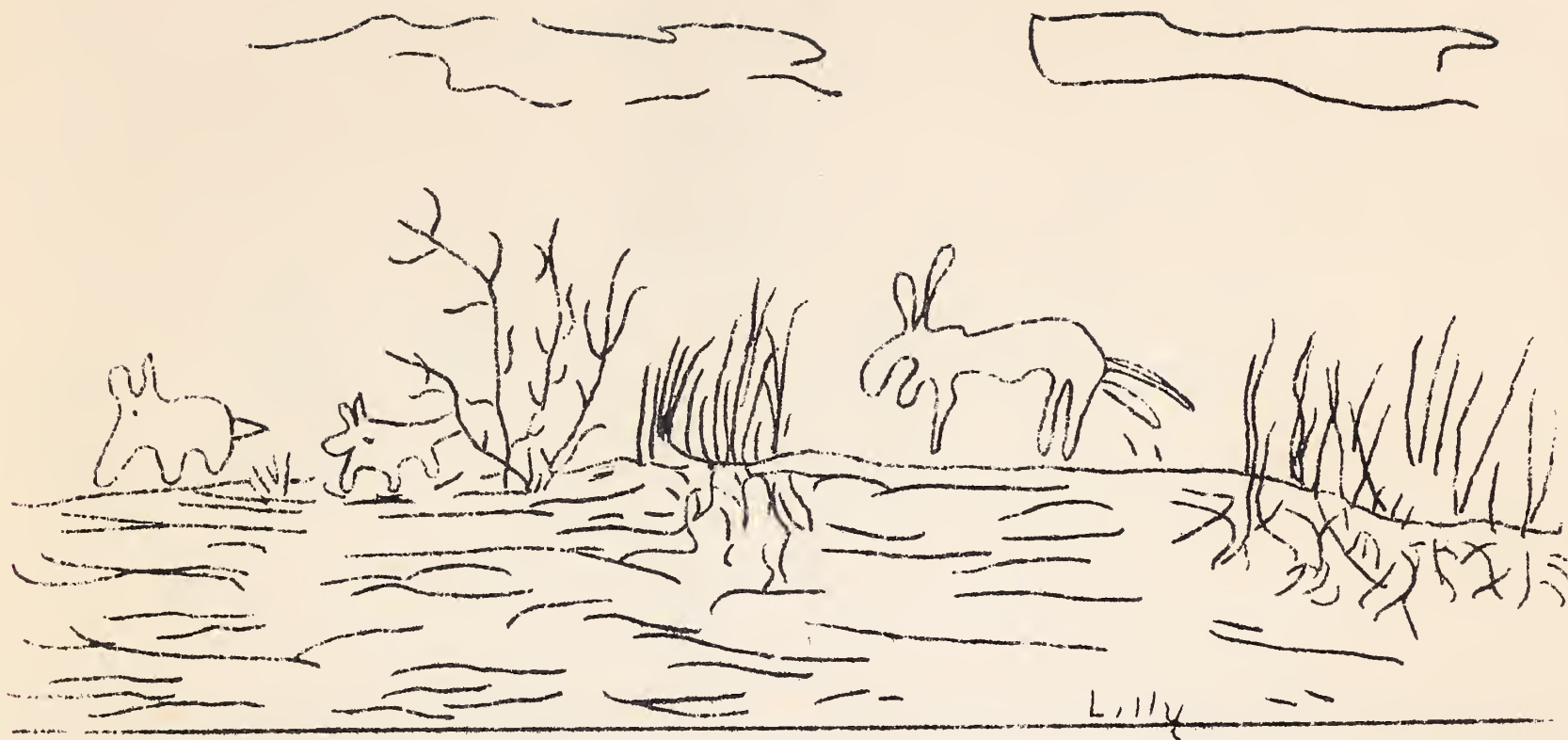
The class listened to stories from their First Grade Reader. They listened to stories written by the class about rain, trees, sand, wind. They learned poems from their reader. The teacher read stories from the Second Grade Reader, "The Animals that Found a Home;" "Little Pig and His Garden."

The class read new words from the blackboard. They made up stories about the word to tell the class.

The children told stories in class that their parents had told them of the land a long time ago. Once the grass was so tall that anyone could not be seen walking through it. Even a horse or cow, sometimes, could not be seen.

We brought pictures and stories for our bulletin board.

1. 1000



WRITING AND SPELLING Specific Objectives

1. To learn to form letters and numbers correctly.
2. To learn to write simple sentences legibly.
3. To learn to spell words used in written work.

Learning Situations

The writing lessons were based upon words and sentences that had to do with the land and water. Children wrote sentence stories for their class book, i. e., "Grass tops make food. Roots store food. Do not let the sheep and goats eat the grass too short. The roots burn and die in the sun without the tops, then we have dust. Let plants grow leaves and seeds." For writing copy they made up sentences about the land, i.e., "We plant trees and grass on the hills. Plants make the water run slowly."

Spelling Words

<u>Written Words</u>		<u>Talking Words</u>
hills	plow	shepherd
trees	plant	spring
grass	grow	arroyo
water	dirt	engineer
slow	soil	valley
top	river	flock
cow	horse	mountains
road	path	wear away
burn	dry	topsoil
bird	snow	tramp
roots	grow	trail
fast	hole	catch
wet	soft	bushes
good	bad	fence



Wind - Rain - Dust.

Frank

NATURAL SCIENCES AND ART Specific Objectives

1. To learn to illustrate stories and poems.
2. To learn to do construction work with crayon, paper, wood.
3. To learn to express our ideas in pictures and by making things.
4. To learn to use paste.

Learning Situations

We made window boxes for our plants. We planted seeds and cared for them. We wrote a supplementary reader and drew pictures of the stories. We walked out to the arroyo near our school and looked to see what had happened to the land. We came back and made up sentences about our trip; drew pictures of dust storms; sheep; gullies; cows; goats; trees; grass; flowers. In Language and Writing Classes we wrote stories about our pictures. We made up a little play about the land.

Throughout the study we talked of how we could take care of our land. We learned about ground litter, topsoil, silt, grazing. We learned many new words.

Nature Study

We developed a knowledge of, and an interest in our birds, trees, grass, rain, and the land. We added to our powers of observation.

Arithmetic

We used animals to add an interest to our addition and subtraction. We counted the cows we saw on our walks; the number of trees we found on our trips; the number of arroyos near our school. We talked of the value of the land to grow things for us to eat.

Music

We learned songs about animals and things living on the land--"This is the Way the Rain Comes Down," "Little Boy Blue," "Robin Red Breast," "I Went to the Animals' Fair," "Trees," "The Squirrel Cage," and some others.

a Forest Community



Learning Situations

Each of these subjects was included in the classroom discussion and in the field excursions, in the written work and in drawing. On our trips we counted the birds, talked of their color, where they lived. We took pictures of the cows and sheep. We counted the cows. We noticed the grass and bushes on our trips, whether they were tall or short, plentiful, green. We talked about our trip and wrote about it. We selected a song to sing which was suggested to us by our trip.

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"When the Crop Lands Go," by Stuart Chase

Harper's September, 1936
"Behind the Drought," by Stuart Chase

Oklahoma University Press, Norman, Oklahoma
"Deserts on the March," by Paul Sears.

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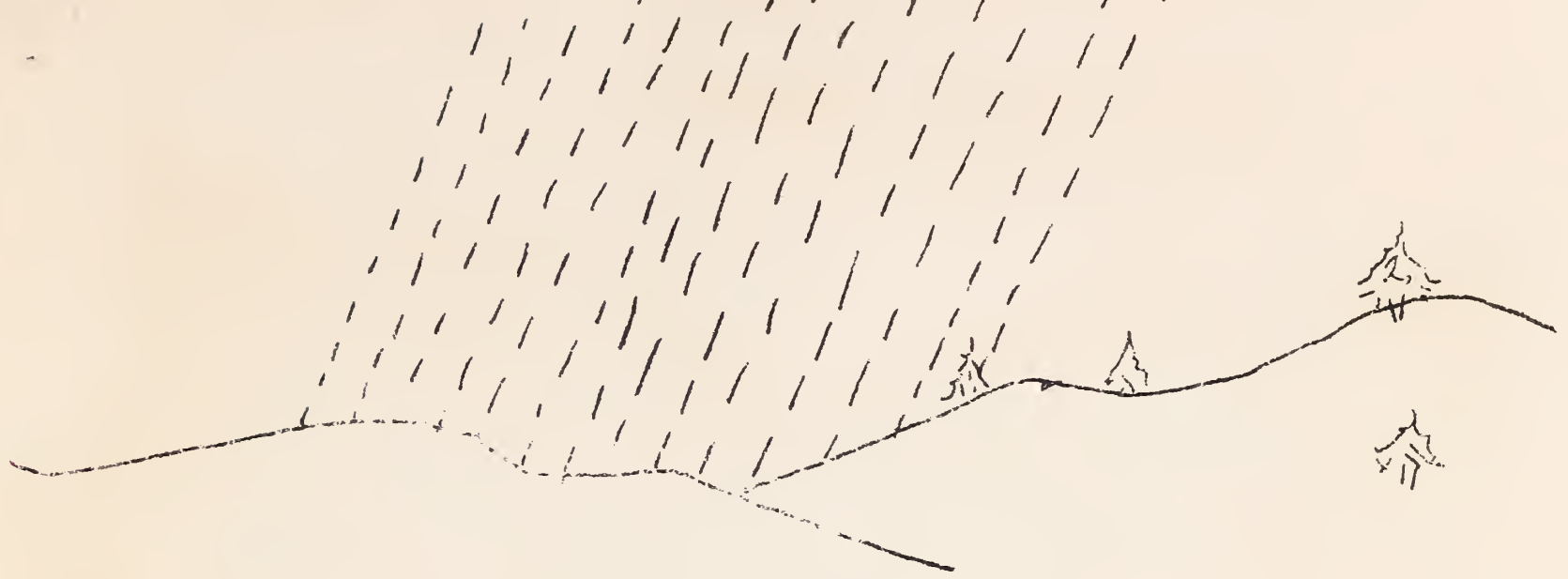
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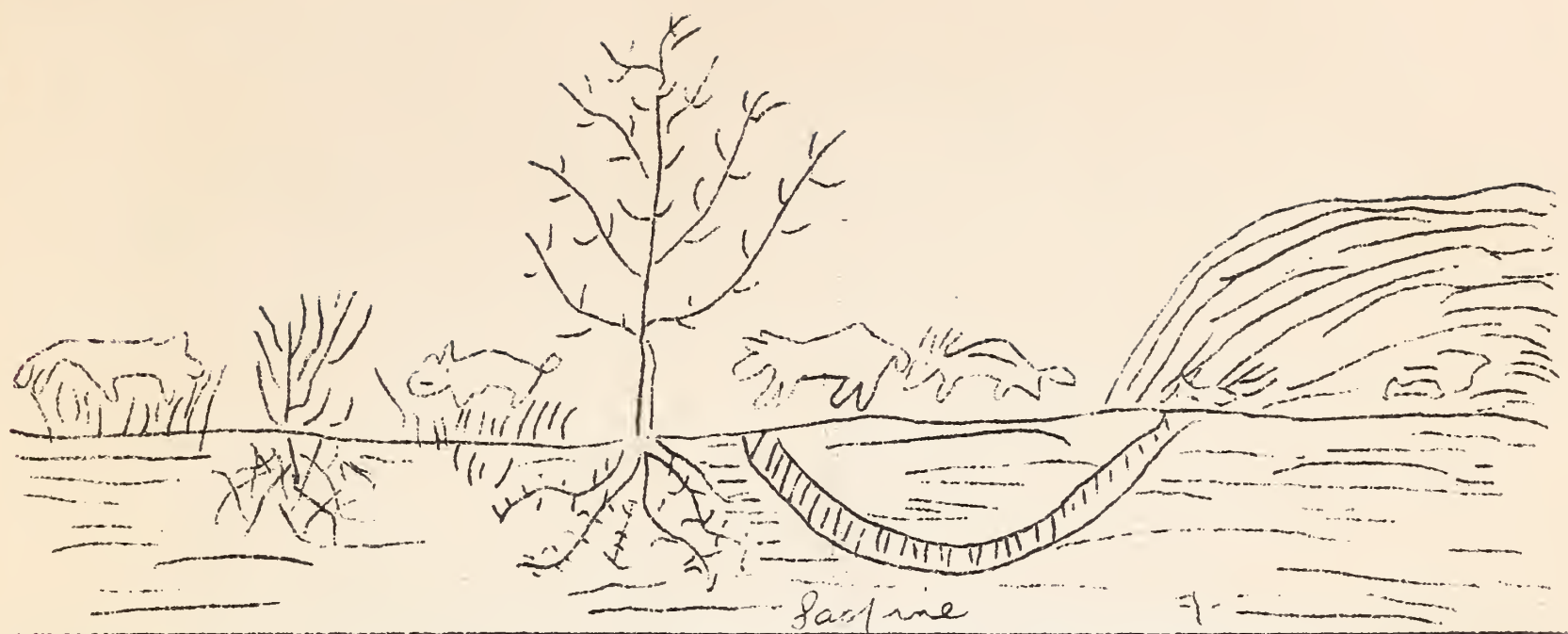
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THE RAIN

One day we watched the rain come down. We caught some in our hands. We found it was clean when it fell from the sky. We saw it run in rivulets down the road. We saw the dirt in the water. We saw the water run off the vacant lot across the street. It ran very fast, carrying the soil with it. There was nothing there to hold it. We talked about rain in the mountains; how it ran so quickly down the hill. We talked of floods. Frank told how the water from the river washed into his house. Roman told how the water from the river washed a wall away from his house. Others told stories of damage and destruction. Some told how their parents rescued big trees and wood from the river as it rushed along.

Then we talked of the good things rain would do for us. The rain gives a drink to the flowers, the grass, the trees, the bushes, the cows, the horses, the children, the baby, the father and mother. It helps everything grow. We learned a song, "This is the Way the Rain Comes Down." We read poems and stories about rain in our literature book.



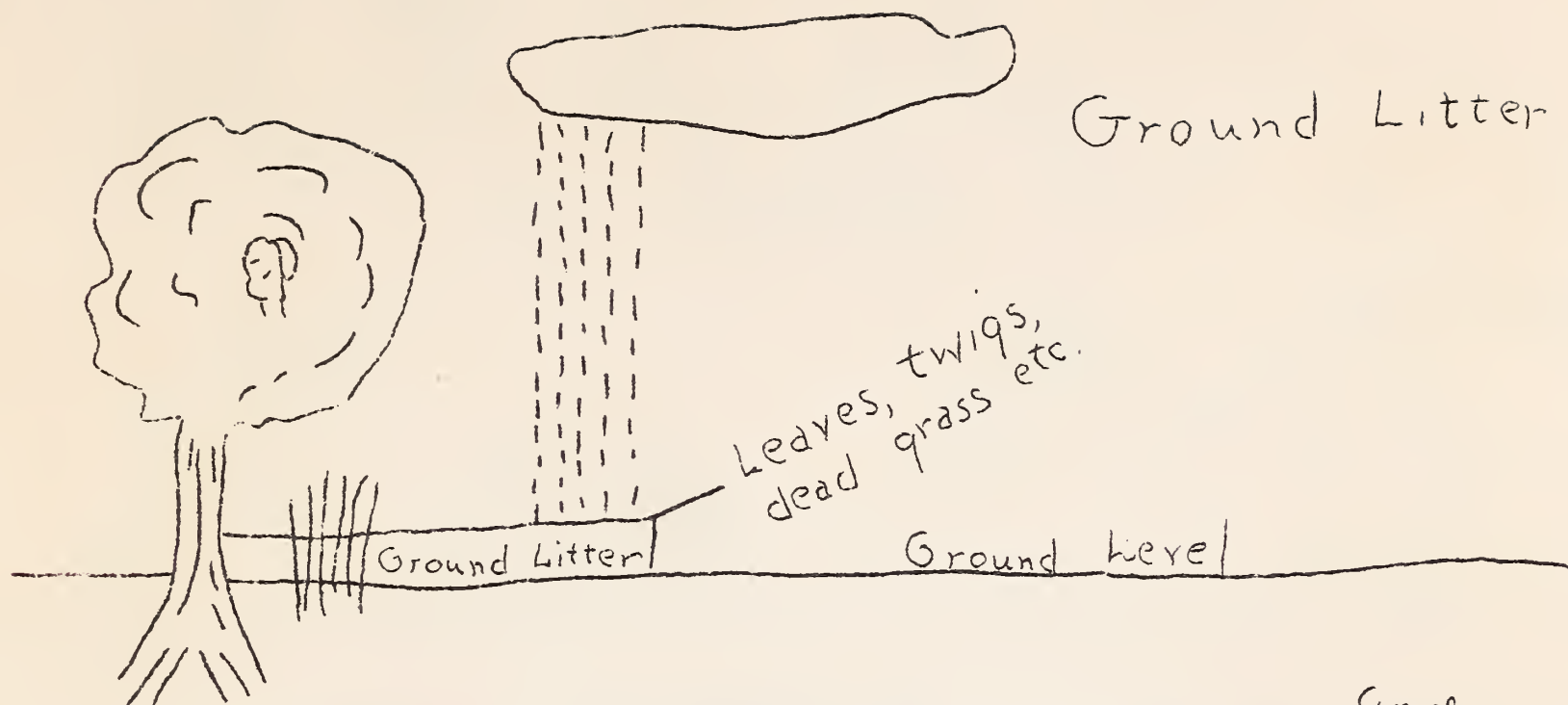


BALANCE OF NATURE

We made up sentence stories about various things in nature such as birds, trees, grass, cows, rain, water, floods, grazing, etc. Such stories as the following were worked out in class groups:

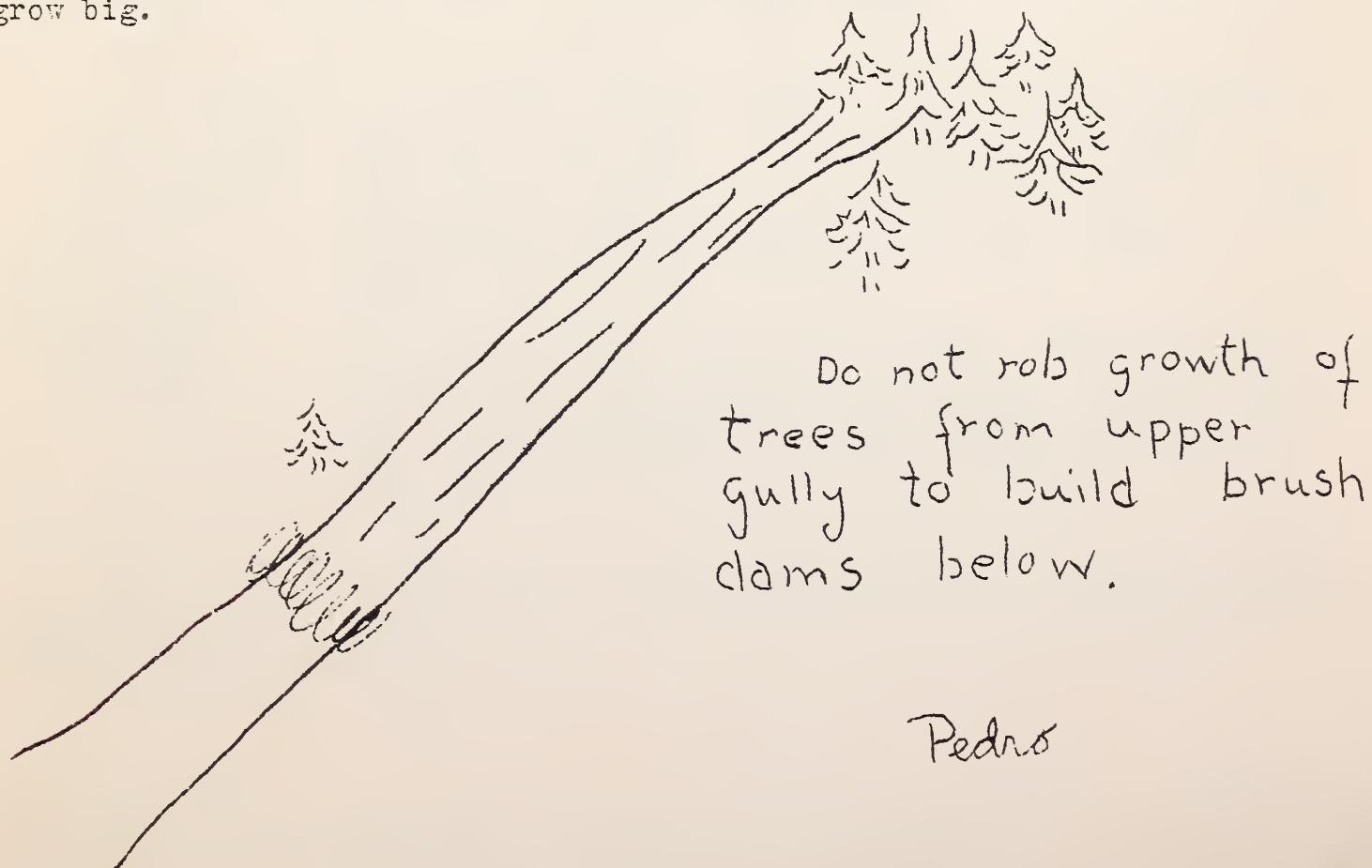
"Many animals live in the forest. The rabbits live under the bushes. They eat grass and twigs. Squirrels live in the trees. They eat roots and seeds. Many birds live in the trees. Foxes live there too. They eat rabbits and little animals."





THE FOREST

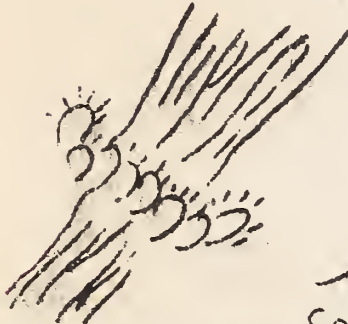
The forests are on the mountains. Many trees live in the forests. The baby trees are little. The mother and father trees are big. The grandmother and grandfather trees are very big. They are very old. They have big roots. They eat too much. They have big branches. They do not let the baby trees see the sun. The sun helps the baby trees to grow. Baby trees must have food to eat and sunlight to grow. The woodsman will cut down the very big trees, then the baby trees can grow. He will cut down some of the big trees then the baby trees can grow big.



Do not rob growth of trees from upper gully to build brush dams below.



Our Bulletin Board



THE BULLETIN BOARD

We drew a large border on one end of the blackboard. We brought many pictures from home about the land. We brought any picture we could find which told us a story of land, or plants, or birds, or water. We told the class the story about the picture. Then the picture was mounted on the bulletin board, and talked about by all the class. Amazing pictures arrived for discussion, which were often, quite apparently, family selections. The class discussion brought out the fact definitely that these pictures had been selected with help from the family together with stories about the land, for many were the incidences which electrified us all. Some of the gory details of flood and disaster could only have had their beginning from an adult discussion.

SUPPLEMENTARY READER



We made a supplementary reader which we used in daily reading class. We drew pictures to illustrate the story. We wrote stories about the raindrop, flowers, the cloud, and the fish in our book. We made up stories in class. Everybody helped. An example of the stories is given.

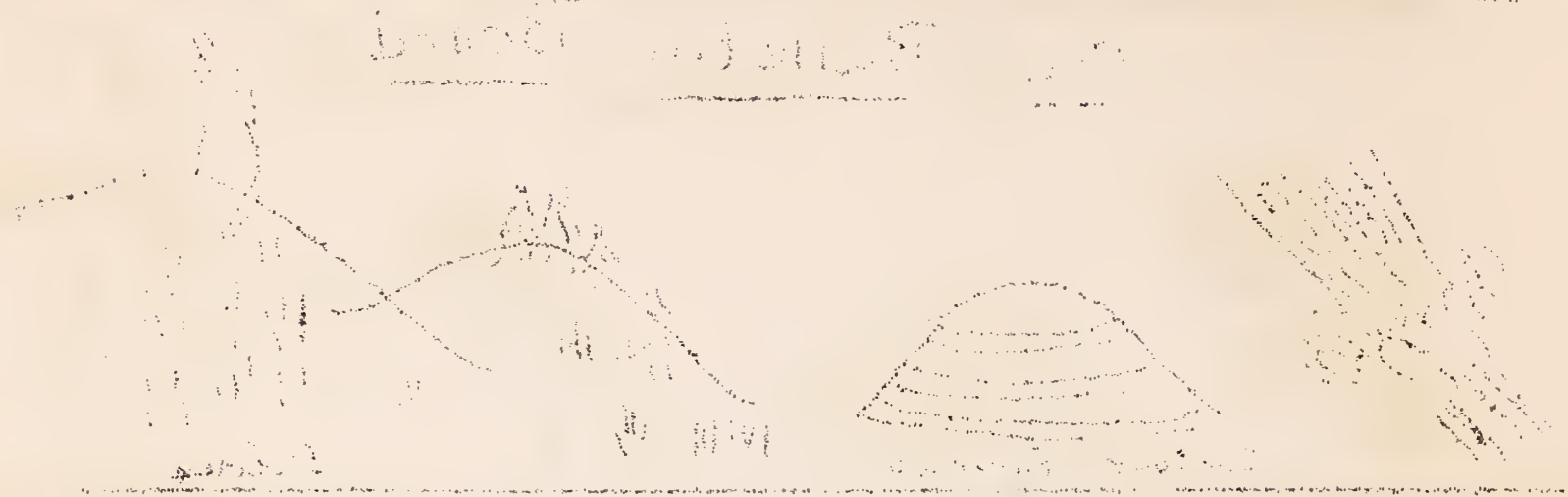
"A raindrop lived in the ocean. The sun lived in the sky. The raindrop saw the sun. It said, 'Oh, Sun, you are so big and strong, pull me up into the sky. The sun pulled and pulled. Soon the raindrop was high up in the sky.

This story was graphically illustrated by a blue ocean and a bright, yellow sun with a smiling face. This picture was signed, "Drawn by Tony Martinez, Age 6."





Project: Animal



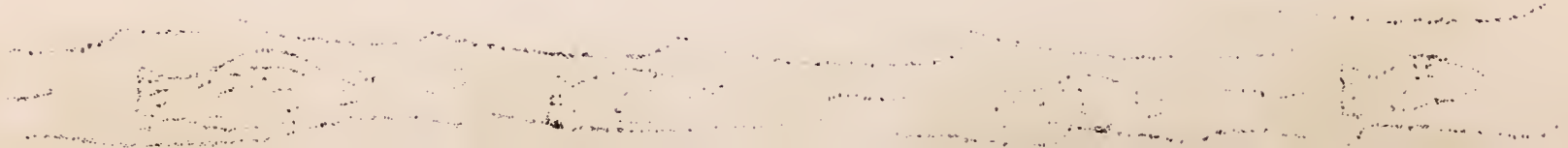
Observations

The first observation was that the animal moved in a straight line. The second observation was that the animal moved in a curved line. The third observation was that the animal moved in a series of horizontal lines. The fourth observation was that the animal moved in a series of vertical lines.

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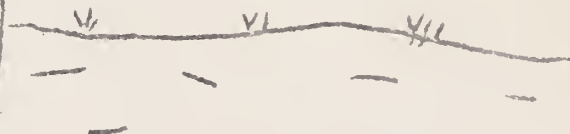
RESULTS

The class and teacher completed the study, not only land and water conscious, but conservation conscious. They learned that vegetation, balance in nature, conservation of land and water, and care of forests were all important and necessary to save our land. They not only realized the loss of our beautiful country year by year, but why this was happening. Ground litter, run-off, erosion, and many other terms became real and vital to them. They learned ways to prevent this accelerated erosion. They learned that: Vegetation holds water, and thus prevents flooding; roots hold soil, to prevent blowing; vegetation needs water to grow; forests need careful cutting; pastures must not be overgrazed; leaves and tops of plants are necessary to growth; we are all dependent upon the land.

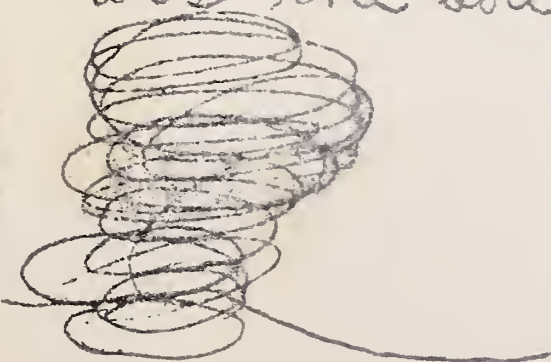
1. Sheep and goats eat grass.



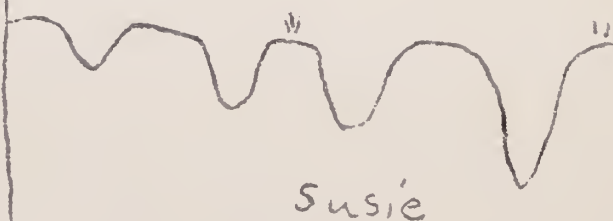
2. and feed only sand



3. The wind blows the soil.



4. The rains make arroyos



Susie

